How Important is Aural Vocabulary Knowledge for Better Listening Comprehension in EFL Learners?

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著者	TAGUCHI, Kaya, Kaya Taguchi
著者別名	田口 賀也
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TAGUCHI, Kaya

Abstract

This study investigates a correlation between aural vocabulary knowledge (AVK) of English and English listening skills among 64 university students learning English in Japan, by partially replicating a preceding study, Matthew (2018). AVK was measured by administering a partial dictation of 63 sentences, and English listening skills were assessed with scores of a TOEIC listening section. Statistical analyses found there was a rather high correlation, .618** (p=0.01) between the learners' overall AVK and their listening skills. Results and discussion are presented with recommendations on future studies that would investigate specific teaching methods and their effectiveness with objective data.

Keywords: aural vocabulary knowledge, AVK, listening comprehension skills, L2 learners of English

Introduction

Vocabulary plays a prominent role in foreign language learning (Laufer & Nation, 1999; Rodríguez & Sadowki, 2000; Nation, 2001 and others). While acquiring lexical knowledge is essential for better L2 learning overall, it is also found to be better for listening comprehension (van Zeeland & Schmitt, 2012). Other studies also indicated the important role of lexical knowledge in L2 listening (Mecartty, 2000; Staehr, 2009). This does not mean, however, that the knowing of meanings of many words/phrases guarantees better listening comprehension. Learners who have an extensive range of vocabulary may not be able to understand speech if they fail to recognize words in speech. Unlike on a written text, words in speech are not spelt out or segmented with spaces and phonological knowledge of words is necessary to identify words in a stream of speech. In fact, Matthew (2018) presents evidence that those who can recognize high and mid-frequency vocabulary in speech have better L2 listening comprehension. In order to investigate whether similar results would be found to those of Matthew (2018), the present investigation partially replicates the study and examines whether aural vocabulary knowledge (AVK) correlates with L2 listening comprehension skills among learners of English.

Literature Review

The study (Matthew, 2018), part of which the current study replicates, attempted to investigate the link between AVK and L2 listening comprehension while considering its participants' L2 proficiency. The subjects were 247 English learners, whose native language was Chinese. The instruments included an aural vocabulary test and a listening comprehension test. In addition, two more tests were used to estimate the learners' relative L2 proficiency levels, which allowed the researcher to subcategorize the study participants into relatively low and high proficiency learners.

The aural vocabulary test was a partial dictation to measure AVK. The test targeted 63 different words from three levels of word frequency. The study participants were given a list of 63 written sentences with one blank each. They listened to the whole sentences read aloud and wrote the words that are omitted in the written text. To successfully write the missing word, they had to know how that word is pronounced.

Another test, which was to measure general listening comprehension levels, was a listening section of IELTS. The test has 40 questions, including multiple choice, sentence completion and others.

One of the two additional tests to measure the learners' L2 proficiency was identical to the Controlled-Production Vocabulary Levels Test (Laufer & Nation, 1999). With the first letter of a target word written, the study participants wrote a target word in a blank in a sentence to make the whole sentence contextually acceptable. It is not an aural test, but a written test. The test contained 64 target items. In order to fill out the blanks, learners need to know the meaning and written form of the target words, but do not need to have phonological knowledge of those items. According to Matthew (2018), the test was intended to measure linguistic knowledge of the learners. The other test was a reading test that required test takers to read 8 texts and answer multiple choice questions. The test was given to measure metacognitive and strategic competencies of the learners in addition to their linguistics knowledge (p.27). More detailed test procedures are mentioned below in the assessment section, and for information regarding how the tests in Matthew (2018) were created, refer to Matthews, 2018, pp. 26-27.

The study found that having Levels 2 (2001-3000 frequency range) and 3 (3001-5000) AVK was found to be predictive of relatively high proficiency, while knowing only the most basic words, Level 1 (0-2000) AVK, was a reliable predictor of lower L2 proficiency. It also indicates that AVK of the most frequent 2000-word families are important for all the study participants, suggesting that the words are prerequisite for adequate L2 learning success (p.32). As one of the pedagogical implications, the study suggests that L2 listening teaching should be engaged with a focus on aural modality of vocabulary.

Present Study

The study is a quasi-replication study of Matthew (2018), as described above. Although the present study uses different and fewer assessment materials, the research question below should be sufficiently answered because of high reliability of most of the assessment materials.

Research Question

Does L2 aural vocabulary knowledge correlate with L2 listening comprehension?

Method

Participants

The participants of this study consisted of 64 college students majoring in economics at a private university in Tokyo, Japan. All of their L1 was Japanese. They were from two separate first-year required English courses the author taught in the fall semester, 2018: one had economics department students (*n*=21) and the other had socio-economics department students (*n*=27). The 16 others were from an elective TOEIC course the author taught in the same semester. The author explained to the students the purpose and the procedures of the study. The data used was only from the students who submitted their consents to participate in this study.

Assessment Materials

Two assessment tools were used for this study. One was a listening section of a TOEIC test and the other was an aural vocabulary test used in Matthews (2018).

Assessment material 1 measurement of English listening proficiency. As an assessment for the participants' English listening skills, the students' TOEIC IP Listening Section scores -45 minutes for 100 listening questions - are used. "IP" stands for Institutional Program and the TOEIC IP test can be administered at the organization's choice of time and location for its employees or students. The student scores are from the test of December 2018, administered by their university.

Assessment material 2 measurement of aural vocabulary knowledge. The Aural Vocabulary Test (see Appendix) in Matthews (2018) is employed to assess AVK. The test was originally developed for Cheng & Matthew (2016) and designed to measure "knowledge of words mediated through the aural modality" (Matthew, 2018, p.25). Test takers are given a sheet of paper, on which 63 simple sentences with one blank each are written. It is a partial dictation. After practicing with one example sentence, the participants start the test by listening to one whole sentence with a target word unwritten and fill out the blank by writing the word. After a one-minute pause, the next sentence is played. Each sentence is played only once. The 63 words to be tested are chosen from three different levels of frequency, which are determined based on the British National Corpus and the Corpus of Contemporary American English. Of the 63 words, 23 words are from Level 1 (0-

2000 frequency range) – highly used words, 27 are from Level 2 (2001-3000 frequency range) and 13 are from Level 3 (3001-5000) -less frequently used words.

The test was administered during class time periods by the author. It took about 15 minutes including the instructions. The students were not allowed to use dictionaries or mobile devices. The scoring followed the rubrics stated in Matthews et al. (2017). With the purpose of the test being to assess aural vocabular knowledge, not orthographical knowledge, a full score, 1 point, was given both to words with spelling errors that did not affect phonological form of the words and to the correctly spelled words. Half of the full score, 0.5, was given to words with partially incorrect spelling that would make the word sound a little different from the target but would still show the test takers recognized the words. For detailed protocols, refer to Matthews at al. (2017).

The test is suitable to answer the research question, whether L2 AVK correlates with L2 listening comprehension. Since the test has allowed Matthews (2018) to conclude that the AVK correlates with overall listening comprehension, it is reasonable to hypothesize that the test would produce similar results with the study participants here in this current study.

Results

The following (Table 1) is the descriptive statistics of the two tests. It shows that most of the reliabilities are higher than .70, which means the tests are reliable assessment tools. The reliability of AVK Level 3, however, was very low, .41, indicating that caution is necessary when interpreting the AVK Level 3 data.

Table 1
Descriptive Statistics of the TOEIC IP Scores and Aural Vocabulary Knowledge (AVK) Test of the Study Participants (n=64)

	Items	Min.	Max.	M	SD	Reliability
TOEIC IP Listening Section	100	170	380	287.66	46.92	0.92-93[1)]
AVK ALL Levels	63	9.52 (%)	59.52 (%)	34.22 (%)	6.84	0.80
AVK Level 1 (highly used words)	23	15.22 (%)	71.74 (%)	45.89 (%)	2.75035	0.80
AVK Level 2 (in-between)	27	9.26 (%)	70.37 (%)	33.33 (%)	3.65474	0.76
AVK Level 3 (less frequently used words)	13	0.00 (%)	50.00 (%)	14.54 (%)	1.40991	0.41

While each of the AVK levels correlates with TOEIC listening scores, Level 1 has the highest correlation with the listening proficiency, .618** (Table 2).

1） Liao, C., Hatrak, N., & Yu, F. (2010)

Table 2
Correlations among AVK All Levels, Each Level and TOEIC Listening Section (n=64)

	AVK All Levels	AVK Level 1	AVK Level 2	AVK Level 3	TOEIC Listening Section
AVK All Levels	-	.878**	.919**	.719**	.618**
AVK Level 1		-	.665**	.550**	.590**
AVK Level 2			-	.536**	.514**
AVK Level 3				-	.493**

**p=0.01

The answer to the research question in this study is that there is a correlation between AVK and listening comprehension proficiency among the study participants, and that the higher the AVK level, the weaker the correlation.

The correlation is even stronger between AVK Level 1 and listening comprehension scores when the participants were divided into three groups, highest, mid and lowest score groups. This grouping was based on the TOEIC IP listening section results[2)] as Table 3 shows. Level 2 shows no correlation with listening comprehension in any of the subgroups and Level 3 shows a statistical correlation among mid and lowest subgroups. The correlation, between Level 3 and listening comprehension, however, is weaker than that between Level 1 and listening comprehension. Not only is the Level 3 correlation weaker, but also the correlation itself appears less certain because AVK Level 3 has low reliability as an assessment tool, as seen in Table 1.

Table 3
Correlations between Each AVK Level and Listening Comprehension

	AVK Level 1	AVK Level 2	AVL Level 3
Highest Score Participants (315-380) n=22	.70**	.27	.38
Mid Score Participants (265-310) n=23	.54**	.34	.52**
Lowest Score Participants (170-260) n=19	.55**	.44	.54**

**p=0.01

Discussion

This study found similar results to the preceding L2 vocabulary studies in relation to L2 listening; L2 aural vocabulary knowledge correlates with L2 listening comprehension. Different from Matthews (2018), however, the present study showed Level 1 AVK, not the Level 2, is the most reliable predictor for listening comprehension irrespective of the listening proficiency levels.

If as other preceding studies have shown, AVK is crucial for listening comprehension for L2 learners, all the three levels of AVK would have been correlational with listening scores. Only Level 1, however,

2) The highest group score was higher than the average score plus 0.5 *SD*, which is 311.12 (287.66 +23.46), the lowest group score was lower than the average score minus 0.5 *SD*, which is 254.20 (287.66-23.46) and the mid group score was in between.

shows a statistical correlation here. This could mean that many of the learners here are not trained enough in aural aspects of vocabulary. The participants aurally recognized only 33% of Level 2 and 15% of Level 3 vocabulary, while they recognized about 46% of Level 1. This seems to explain why, in the subgroups, Level 2 AVK shows no correlation with listening skills and why Level 3 AVK has low reliability as an assessment tool. Many of the study participants seem to have not acquired enough vocabulary to a point where they can provide consistent data so that statistical analyses can be conducted. Many Levels 2 and 3 AVK results may have been at random, and not based on actual knowledge of the participants. In other words, Levels 2 and 3 AVK alone may not be used reliably as an assessment tool for the learners here.

Irrespective of the weak results of Levels 2 and 3 AVK, this current study found the importance of overall AVK for better listening as previous studies have shown. It is reaffirmed that vocabulary teaching needs to focus on phonological aspects in addition to other aspects of words such as their meanings, orthography and usage.

Before teachers try to equip learners with aural vocabulary, however, teachers should give an aural vocabulary test to their students as a diagnostic test as Matthews (2018) suggests. They can know how well/ little the learners know about phonological aspects of vocabulary. Teachers also need to give a test similar to the Controlled-Production Vocabulary Levels Test mentioned above in order to see if the students really know the meaning of words. For those whose English proficiency is not high enough, teachers instead should have students write the meanings of the target words in their native language after giving them an aural vocabulary test. This would make it clearer whether the learners are simply catching the sounds of the target words or whether they really know the meanings of the words.

Limitations and Future Study

There are several limitations to this study. First, the number of participants was small, 64, and their native language was only Japanese, which does not allow generalization of the study results, especially outside Japan. In addition, since only an aural vocabulary test was given to assess vocabulary range of the participants, it was not clear whether the learners knew the meaning of the target word and filled out the blank or whether they simply wrote what they heard. Diverse assessment tools, such as reading tests to measure learner linguistic skills and listening strategy questionnaires to assess metacognitive processes in listening, would have provided helpful clues as to the kind of L2 listening comprehension obstacles learners face.

Future studies should include different kinds of vocabulary tests to better assess learners' vocabulary knowledge. A test that asks learners about the meaning of the target words is necessary. An interview session would also be insightful to identify what is difficult for learners when they try to recognize words in a sentence read aloud. Reading tests and listening questionnaires would be worthwhile as well. The audio of the aural vocabulary test Matthew (2018) provides appears to sound rather very fast compared to English many

of the students in Japan would usually hear. If that is the case, not only the phonological aspects of individual words, but the connected speech features should be taught with more emphasis than now.

Then how exactly should teachers help their students? Future studies should be conducted not only with a purpose of clarifying what hinders better listening comprehension – as in many preceding studies. Studies must present specific teaching methods with objective results about how teachers can be effective in real classrooms. Appropriate diagnoses are necessary, but effective remedies should be urgently provided.[3)]

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3） This paper was proofread by Jean-Pierre Corbeil at ESS, English Support Service, but any errors that remain are my sole responsibility

外国語としての英語学習者における音声面についての語彙知識とリスニング能力についての相関関係についての調査

田　口　賀　也

要旨

この論文では音声面に関する語彙知識と英語リスニング能力間の相関関係について調査した結果を記した。Matthew（2018）の研究を一部再現しての調査である。被験者は64名の日本の大学で英語を履修する学習者である。音声面についての語彙テストは文中の一語を書き取るディクテーション、リスニング能力はTOEICのリスニングセクション結果を使った。音声面についての語彙知識とリスニング能力間には.618** (p=0.01) という中程度の相関関係が見られた。今後は音声面の語彙指導をいかに行うべきか客観的なデータを用いて具体的に提示するような研究が必要であると記した。

キーワード：*音声面に関する語彙知識、リスニング能力、外国語としての英語学習者*

Appendix

Aural Vocabulary Assessment（J. Matthews / System 72 (2018) 23-36）

Instructions: Listen to the sentences and fill in the blanks according to what you hear. Each sentence will be heard ONLY ONCE. Each sentence has only one word missing. Look at the example in the box below:

If you hear: “He lives in Europe.” － You write “Europe” in the space provided. Example: He lives in.....

1. Her two favourite subjects at university were _____ and computer studies.
2. The worker had a lot of _____ in the field.
3. She has worked as a _____ for most of her life.
4. I called his _____ this morning but he wasn’t there.
5. The police officer made sure the _____ was secure.
6. The teacher _____ for the children every day.
7. This _____ has very good food.
8. Two things which I love the most are _____ and painting.

9. The poor _____ made it difficult to enjoy travelling.

10. A major _____ of the machine is its cost.

11. The _____ between the two groups went for over an hour.

12. The woman wanted to _____ a few issues to the student.

13. I will try to _____ the office tomorrow morning.

14. The man found it difficult to _____ in the hot weather.

15. The student was _____ she would be able to complete the work on time.

16. The young man was more _____ than the older man.

17. The government tried to increase _____ within the country.

18. The student had seen a similar _____ in his book last year.

19. He explained the _____ to his friend.

20. The student couldn't decide which _____ would be best for him.

21. The best _____ was near the post office.

22. Living in a small town can sometimes be a _____ for students.

23. Which _____ of the play did you like the most?

24. The door to the _____ was very difficult to open.

25. He had disliked _____ his entire life.

26. Some children will choose to eat a _____ rather than a piece of fruit.

27. The woman wanted to _____ he book as soon as possible.

28. The man wanted to _____ some of his money.

29. It was important to _____ the information before the end of the day.

30. They wanted to _____ the worker the following day.

31. The _____ team was the best in the state.

32. The boy surprised the man by speaking in a very _____ way.

33. She planned to contact the _____ the following day.

34. The children rode their bikes along the _____ path.

35. The cleaner needed to buy a new _____ before the end of the week.

36. It was necessary for the _____ to take place as soon as possible.

37. The woman wasn't sure what the _____ meant.

38. He was surprised to see a large _____ on his kitchen table.

39. The child's _____ was very important to his grandparents.

40. The police found the _____ in the park yesterday.

41. The boy's _____ was to assist his friends.

42. The family was hoping to reach the _____ before evening.

43. The man wanted to _____ the appearance of the room.

44. The politician wanted to get a _____ as soon as possible.

45. It is often important to _____ your plans to friends.

46. The man was hoping to _____ the book within a month.

47. The _____ dancing went on for hours.

48. The children had a _____ experience at the park.

49. She didn't have any information about the _____ of the meeting.

50. She had been a _____ teacher for about three years.

51. The _____ had involved many years of planning.

52. The politician's _____ was popular with his supporters.

53. The woman bought _____ and bread from the supermarket.

54. The _____ of the project would involve higher costs.

55. The man had lived in _____ with his family for many years.

56. The team's _____ was totally unexpected.

57. His _____ was unhappy with the meal.

58. She could _____ the colours very clearly.

59. The student wasn't able to _____ the poem very clearly.

60. Some things are very difficult to _____ .

61. The boy found it hard to _____ the hot weather.

62. The _____ number of problems created stress in the office.

63. The man was quite _____ towards the young boy.

Target words (not provided to test takers during the test)

Item Number	Missing Word	AVK Level
#1	finance	1
#2	experience	1
#3	researcher	1
#4	office	1
#5	evidence	1
#6	cares	1

Item Number	Missing Word	AVK Level
#21	accommodation	2
#22	disadvantage	3
#23	aspect	2
#24	garage	1
#25	conflict	2
#26	biscuit	1

Item Number	Missing Word	AVK Level
#41	motive	2
#42	border	2
#43	transform	2
#44	divorce	1
#45	reveal	2
#46	translate	2

#7	region	1
#8	nature	1
#9	transportation	2
#10	limitation	1
#11	debate	2
#12	explain	1
#13	contact	1
#14	operate	1
#15	positive	1
#16	successful	1
#17	stability	1
#18	diagram	3
#19	method	2
#20	career	1

#27	publish	2
#28	withdraw	2
#29	analyze	2
#30	interview	1
#31	legal	1
#32	formal	2
#33	author	2
#34	cement	3
#35	uniform	2
#36	surgery	2
#37	symbol	2
#38	parcel	3
#39	welfare	2
#40	weapon	1

#47	classical	1
#48	terrific	3
#49	duration	3
#50	chemistry	3
#51	construction	2
#52	objective	2
#53	vitamins	3
#54	expansion	2
#55	harmony	3
#56	elimination	2
#57	acquaintance	3
#58	perceive	2
#59	recite	3
#60	attain	3
#61	endure	2
#62	infinite	3
#63	hostile	2